

Press release

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CURIE spices up PRACE portfolio

On 12 July 2012, supercomputer CURIE, hosted in France and the second Tier-0 system to be added to the PRACE portfolio was officially inaugurated by Ms. Geneviève Fioraso, French minister of Higher Education and Research. Ms. Neelie Kroes, vice-president of the European Commission responsible for Digital Agenda, sent her congratulations through a pre-recorded video message. Already, CURIE's novel architecture has been instrumental to a team of researchers who computed the structure of the entire observable universe, from the Big Bang to the present day – a world premiere.

Made available by GENCI, designed by Bull and operated at CEA Very Large Supercomputing Centre, CURIE has been gradually opened to European scientists through PRACE Regular and Preparatory Access Calls. Composed of fat, hybrid and thin nodes, the machine is fully operational since 1 March 2012. With a peak performance of 2 petaflops, CURIE, a Bull BullX system based on the latest Intel® Xeon® technology, is a combination of huge computational capabilities - powered by more than 92.000 cores - and strong data processing capacities (more than 360 TB of main memory and 15 PB of attached disk). *"PRACE is proud to have CURIE in its portfolio of systems and we now welcome all researchers to fully exploit this unique machine"*, said Dr. Maria Ramalho, PRACE Managing Director.

CURIE fulfills the French commitment to host one of the supercomputers of PRACE, the Partnership for Advanced Computing in Europe. *"The first results obtained on CURIE pave the way to the resolution of problems which were thought unreachable"*, Catherine Rivière, CEO of GENCI, said.

To map the structure of the universe, simulations were carried out to track more than 550 billion particles. The results have helped to develop a better understanding of the nature of 'dark energy' and its influence on the way the universe is structured, the origins of the distribution of dark matter and galaxies. *"CURIE is a milestone in the dynamic GENCI has initiated and will continue to develop in France. It should help to spread HPC not only for producing knowledge but also for improving our industrial competitiveness"*, Ms. Fioraso stated.

CURIE's stunning performance has also been put to use to tackle a major public health concern that affects over 20 million people in the world: Alzheimer's disease. CURIE's computing power has enabled researchers to reach a new level in their understanding of the mechanisms of brain degeneration. Thanks to CURIE, the chemical processes at work in living molecules are becoming more accessible. *"These powerful machines can support a range of European innovation, solve a range of social problems and boost a range of industrial sectors. Europe's ability to grow depends on our ability to innovate. We have the potential to do that"*, Ms. Kroes said.

About PRACE

The Partnership for Advanced Computing in Europe (PRACE) is an international non-profit association with its seat in Brussels. The PRACE Research Infrastructure (RI) provides a persistent world-class High Performance Computing (HPC) service for scientists and researchers from academia and

industry. The Implementation Phase of PRACE receives funding from the EU's Seventh Framework Programme (FP7/2007-2013) under grant agreements n° RI-261557 and n° RI-283493.

About GENCI

<http://www.genci.fr/>

GENCI, Grand Equipement National de Calcul Intensif, is a «société civile» under French law, co-owned by the French State represented by the [Ministry of Higher Education and Research](#), by [CEA](#), by [CNRS](#), by the Universities which are represented by the Conférence des Présidents d'Université and by [Inria](#). GENCI is leading the French policy in the field of HPC and represents France in PRACE.

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